

Notes about corynebacterium diphtheriae toxin

1) HBEGF

Heparin binding epidermal growth factor,

Found in eukaryotic cells, it is the site for binding of diphtheria toxin.

2) DTXR

Diphtheria toxin x receptor,

Secreted by our cells when iron (Fe) concentration in blood is normal, it detoxify diphtheria toxin.

When Fe concentration is low DTXR will not be secreted, so

Diphtheria toxin will inhibit EF (elongation factor 2) a growth factor found in our cells and is responsible for movement of new polypeptide chain in the ribosome for the synthesis of proteins.

The inhibition of protein synthesis leads to:

1) Necrotizing effects in the heart, liver, kidneys, adrenals and very sever fatal hemorrhages.

2) Nerve damage (neurotoxic effects), paralysis of: soft palate, eye muscles and extremities (hands and legs).

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